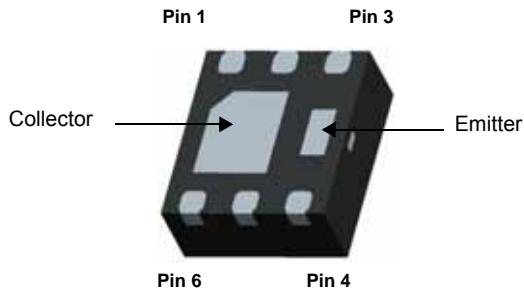


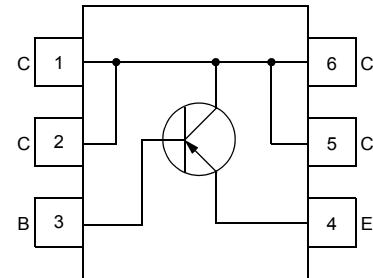
## FJMA790 PNP Epitaxial Silicon Transistor

**High current surface mount PNP silicon switching transistor  
for load management in portable applications**

- High Collector current
- Low Collector-Emitter Saturation Voltage
- RoHS Compliant



MicroFET2X2



### Absolute Maximum Ratings $T_a = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage	-50	V
$V_{CEO}$	Collector-Emitter Voltage	-35	V
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current (DC)	-2	A
$P_D$	Power Dissipation Note1) Note2)	1.56 0.8	W W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{STG}$	Storage Temperature	-55 ~ 150	$^\circ\text{C}$

### Thermal Characteristics $T_a=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Max.	Units
$R\Theta_{JA}$	Thermal Resistance, Junction to Ambient Note1) Note2)	80 154	$^\circ\text{C}/\text{W}$ $^\circ\text{C}/\text{W}$

Note1): The device mounted on a 1inch<sup>2</sup> pad of 2 oz copper pad on a 1.5 x 1.5 in. board of FR-4 material.

Note2): The device mounted on a minimum pad of 2 oz copper pad on a 1.5 x 1.5 in. board of FR-4 material

**Electrical Characteristics** $T_a = 25^\circ\text{C}$  unless otherwise noted

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Units
$\text{BV}_{\text{CBO}}$	Collector-Base Breakdown Voltage	$I_C = -100\mu\text{A}, I_E = 0$	-50			V
$\text{BV}_{\text{CEO}}$	Collector-Emitter Breakdown Voltage	$I_C = -10\text{mA}, I_B = 0$	-35			V
$\text{BV}_{\text{EBO}}$	Emitter-Base Breakdown Voltage	$I_C = -100\mu\text{A}, I_E = 0$	-5			V
$I_{\text{CBO}}$	Collector Cut-off Current	$V_{\text{CB}} = -35\text{V}, I_C = 0$			-0.1	$\mu\text{A}$
$I_{\text{EBO}}$	Emitter Cut-off Current	$V_{\text{EB}} = -4\text{V}, I_C = 0$			-0.1	$\mu\text{A}$
$h_{\text{FE}}$	DC Current Gain	$V_{\text{CE}} = -1.5\text{V}, I_C = -1\text{A}$ $V_{\text{CE}} = -1.5\text{V}, I_C = -1.5\text{A}$ $V_{\text{CE}} = -3\text{V}, I_C = -2\text{A}$ $V_{\text{CE}} = -2\text{V}, I_C = -500\text{mA}$	100 100 100 100		400	
$V_{\text{CE}(\text{sat})}$	Collector-Emitter Saturation Voltage	$I_C = -500\text{mA}, I_B = -5\text{mA}$ $I_C = -1\text{A}, I_B = -10\text{mA}$ $I_C = -2\text{A}, I_B = -50\text{mA}$			-250 -350 -450	mV mV mV
$V_{\text{BE}(\text{sat})}$	Base-Emitter Saturation Voltage	$I_C = -1\text{A}, I_B = -10\text{mA}$			-0.9	V
$V_{\text{BE}(\text{on})}$	Base-Emitter On Voltage	$V_{\text{CE}} = -2\text{V}, I_C = -1\text{A}$			-0.9	V

**Package Marking and Ordering Information**

Device Marking	Device	Package	Reel Size	Tape Width	Quantity
790	FJMA790	MLP 2x2 Single	7"	8mm	3,000 units

## Typical Characteristics

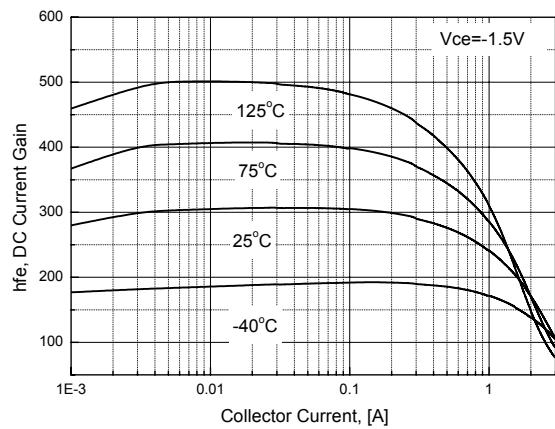


Figure 1. DC Current Gain,  $V_{CE} = 1.5V$

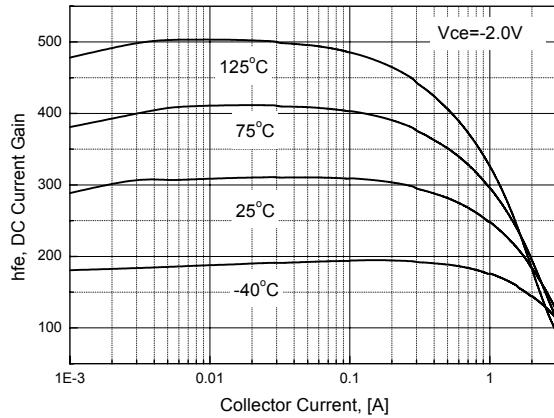


Figure 2. DC Current Gain,  $V_{CE} = 2V$

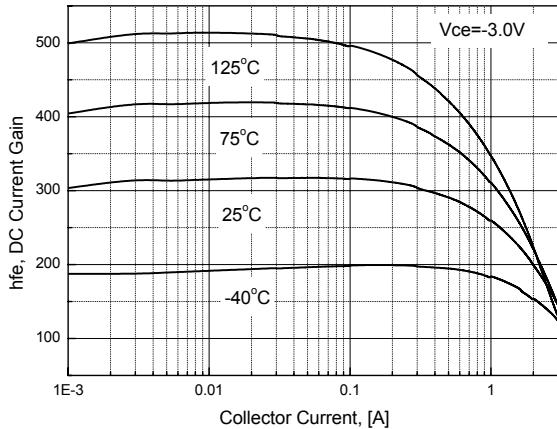


Figure 3. DC Current Gain,  $V_{CE} = 3V$

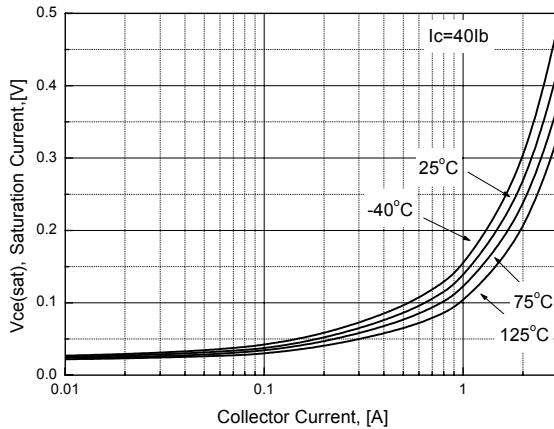


Figure 4. Collector-Emitter Saturation Voltage(1)

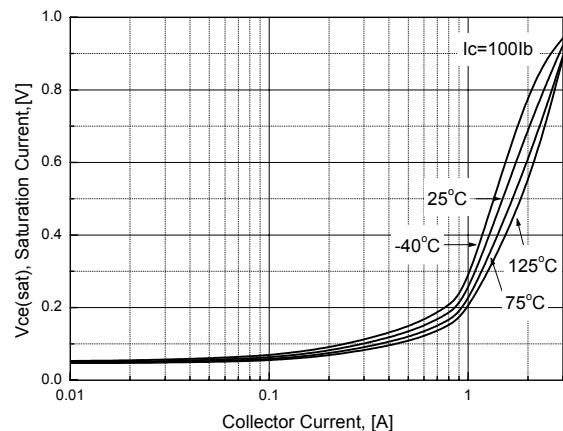


Figure 5. Collector-Emitter Saturation Voltage(2)

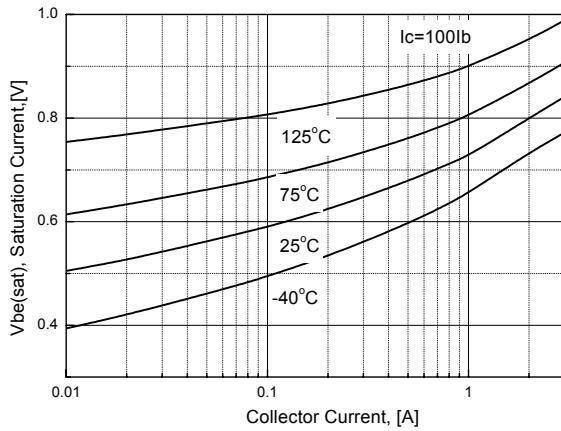
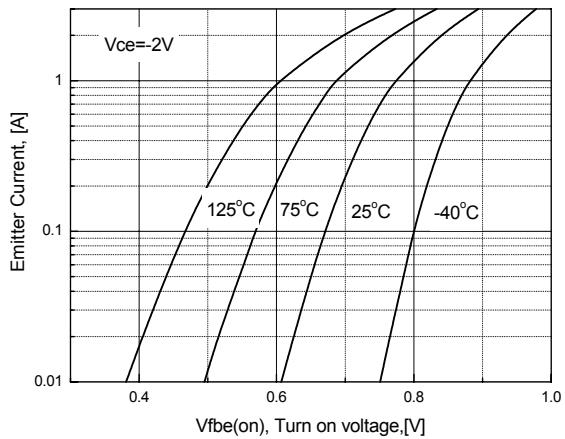
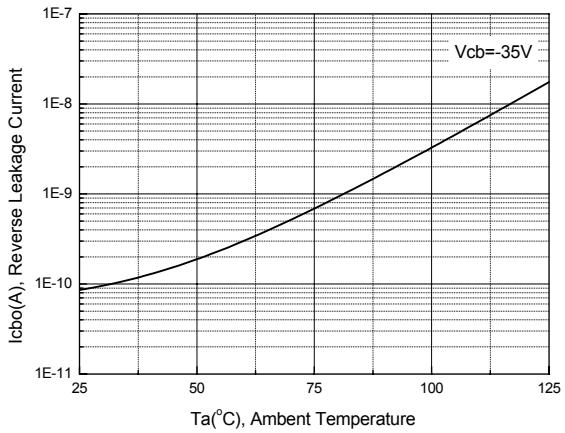


Figure 6. Base-Emitter Saturation Voltage

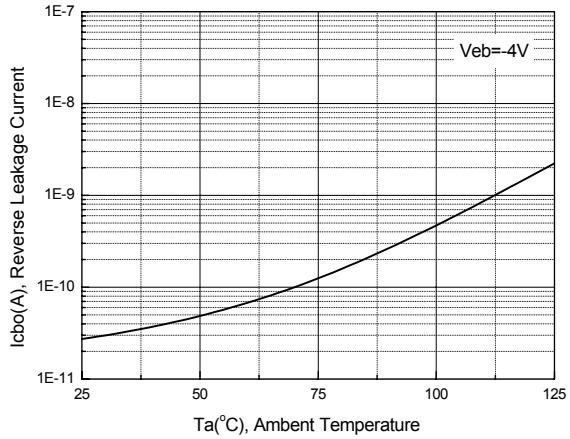
**Typical Performance Characteristics** (Continued)



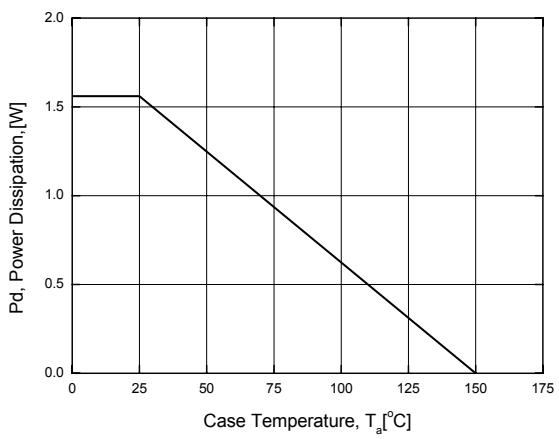
**Figure 7. Base- Emitter Turn On Voltage**



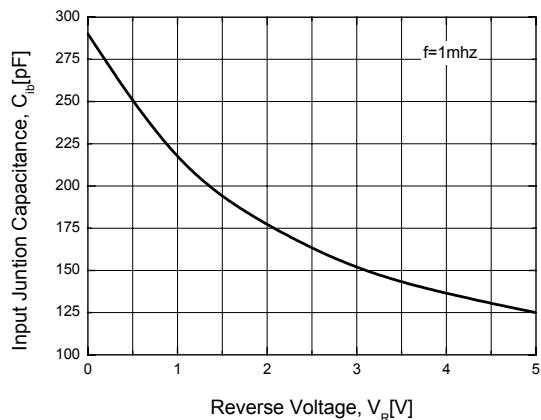
**Figure 8. Collector-Base Leakage Current**



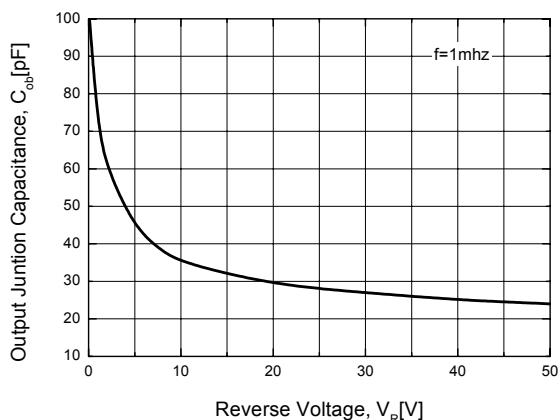
**Figure 9. Base-Emitter Leakage Current**



**Figure 10. Power Derating**



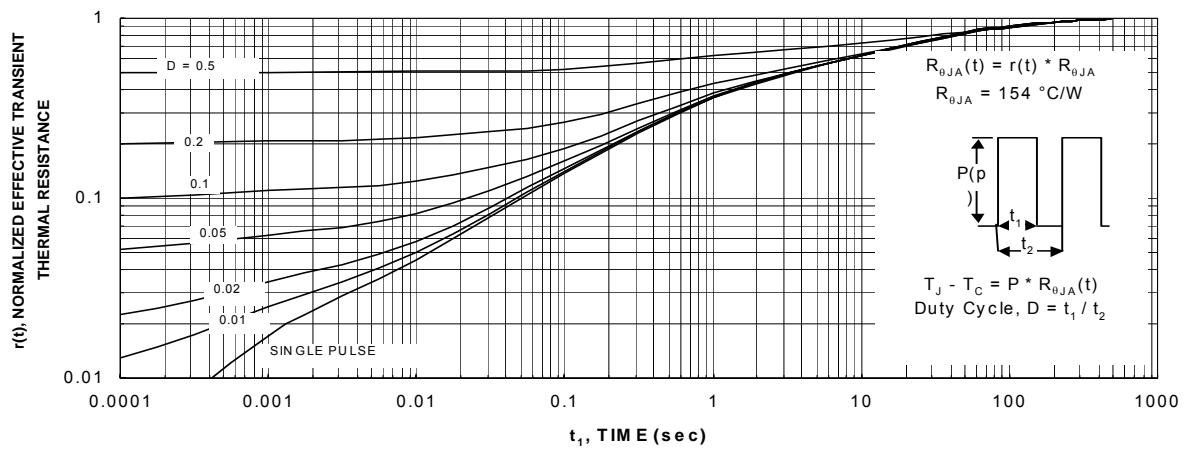
**Figure 11. Input Capacitance**



**Figure 12. Output Capacitance**

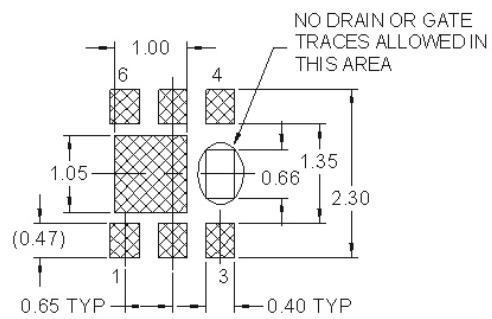
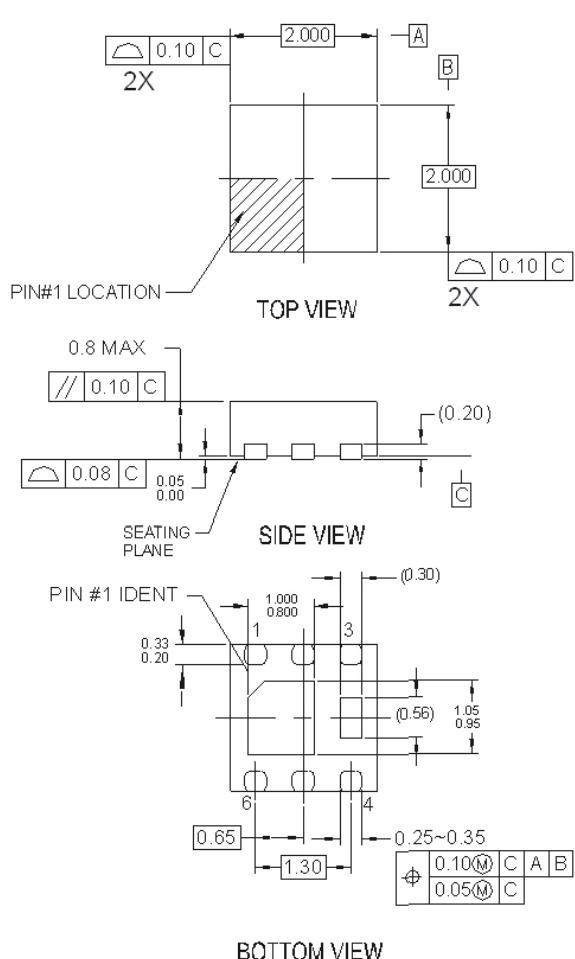
## Typical Performance Characteristics (Continued)

Figure 12. Transient Thermal Response

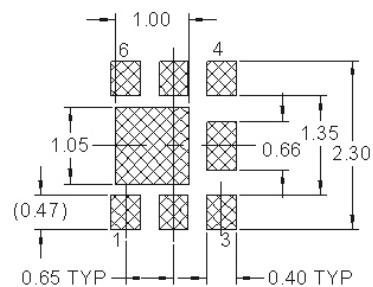


## Mechanical Dimensions

# MicroFET2X2



RECOMMENDED LAND PATTERN OPT 1



RECOMMENDED LAND PATTERN OPT 2

### NOTES:

- A. DOES NOT FULLY CONFORM TO JEDEC REGISTRATION  
MO-229 DATED AUG/2003
- B. DIMENSIONS ARE IN MILLIMETERS.
- C. DIMENSIONS AND TOLERANCES PER  
ASME Y14.5M, 1994
- D. DRAWING FILENAME: MKT-MLP06Lrev2.

Dimensions in Millimeters



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